

# (lāng'gwīj) matters

Professional, Technical & Legal Translations

Language Matters

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## CERTIFICATE OF ACCURACY

STATE OF COLORADO ) SS: 84-1205131  
COUNTY OF BOULDER )

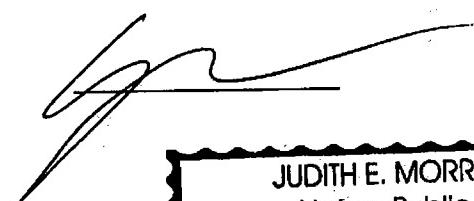
ROSANGELA FIORI being duly sworn, deposes and says that she is the Manager of LANGUAGE MATTERS, 1445 Pearl Street, Boulder, CO 80302 and that she is thoroughly familiar with KERILYN SAPPINGTON, who translated the attached document titled:

PUBLICATION NO. 472593

from the TRADITIONAL CHINESE language into the ENGLISH language, and that the ENGLISH text is a true and correct translation of the copy to the best of her knowledge and belief.



Sworn before me this  
April 27, 2005



JUDITH E. MORRIS  
Notary Public  
State of Colorado

My Commission Expires 08/02/2008

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Application date: March 7, 2001

Number: 90203361

Category: A63B22/02

(The column above is completed by this office)

**Bulletin**

Specifications for New Model Patent		
One. Name of new model	Chinese	Structure of jogging machine with low exercise load <b>472593</b>
	English	
Two. Inventors	Names (Chinese)	1. Guo-Liang Wang 2. Liang-Jou Wu
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	Representative (English)	1.

Four. Chinese abstract of invention (Name of invention: Structure of jogging machine with low exercise load)

The present invention pertains to the structure of a jogging machine with a low exercise load. It is constructed of a base seat and a framework, wherein said framework further comprises a supporting board body and a loop of running belt wrapped around the outside of said supporting board, and said loop of running belt can sustain dynamic force with corresponding front and back roller wheels pulling to turn the wheels, wherein it mainly is a connecting piece that has been installed at the right location at the back end of said structure only, enabling the pivotal connection to position at the right location on the base seat, and an active top supporting piece installed and connected at the front end of the framework's down side, and making a return piece be further connected at the bottom end of said top supporting piece, then, positioning the return piece at the right location on the base seat; here it relies on the structure described above for its composition, after the front end of the framework sustains force and because the active top supporting piece's simultaneous displacement follows it in a downward incline, again waiting for gravity to gradually lessen, and it further relies on the top elevation function of the return piece to simultaneously return to its original position, thus using said framework it is possible at a specified level for the axis to repeatedly slide up and down in a particular exercise session.

English abstract of invention (Name of invention: )

This case has been forwarded to

National (local) patent application    Application date    Case number    Opinion priority

None

## Five. Invention specifications (1)

The present invention pertains to a running machine, further details reveal that the new invention indicates a framework that enables the subsequent stress to produce changes to the angle of incline and greatly reduce the runner's exercise load for a particular session.

Accordingly, the framework of running machines during use generally maintains a stable angle, thus whenever users are engaged in running exercise it is equal on level ground or sloping ground and gradually during running there is no clear difference. Of course this level of exercise and physical agility is not too great of a burden for ordinary people; however, for those whose physical agility is poor (for example, for obese persons or for people with mild chronic cardio-pulmonary disease), it's possible that in terms of the physical force load, they may be unable to sustain the exercise for a long time, thus they cannot achieve the level of exercise they need and they miss out on the anticipated health results of exercise.

In like manner, according to Figure 3, is one type of treadmill structure, that is, U.S. Patent Invention Number **5626539**. Said type of treadmill 10 structure has installed one rotatable belt 16 on running tread 12 and 14, allowing the user during the stepping process to simultaneously produce a similar sliding movement, it is just that during use of the conventional treadmill 10, because treads 12 and 14 are alternately installed two independent treads, thus creating an interval between the two alternating treads 12 and 14, during the belt 16 rotation process, if the user's foot does not cautiously tread at the time of said interval, often it easily creates a "gap" that causes injury; furthermore during stepping this type of exercise equipment is still similar to running or climbing, the user must first elevate the foot and exert force to step on the position at a higher point for the corresponding tread 12 (or 14) to adequately enable said tread 12 (or 14) to subsequently move further downward and return to again take the body weight (namely, the upward elevation gravity) and move the entire amount onto the tread 12 (or 14), to make the other tread 14 (or 12) simultaneously produce the upward movement path. This repetition gradually anticipates

## Five. Invention specifications (2)

that the user's foot area is placed up in the same way during the exercise session only for the upward movement of tread **14** (or **12**), therefore the weight of the foot of course adds to the load for the user, simply speaking, this type of treadmill **10** or conventionally known running machine, although in fact it can produce definite exercise results, it cannot effectively distribute the load of the user in terms of upward elevation of gravity during the exercise process, thus there is no way to help the user maintain exercise for a long period of time.

Herein, to improve the disadvantages of the aforementioned conventionally known invention during use, the inventors relied on familiarity of many years of experience in this industry and active efforts devoted to research and development, and finally developed the present invention. Its main objective is to make said exercise equipment during the usage process suitably and accurately reduce the load produced by the user's own body weight, the weight produced by the upward elevation gravity load to thus be more relaxed and happy when engaging in exercise health activities for a sustained period of time, enabling those with a special physical agility condition or those of various ages to use this type of exercise or health machine to meet their needs for the benefits of exercise in a safe and healthy way.

To increase understanding of the technical methods and structural characteristics of the present invention, corresponding details are hereby presented below:

- Figure 1. Is a combination lateral view of the preferred embodiment of the present invention.
- Figure 2. Is a movement view of Figure 1's preferred embodiment of the present invention.
- Figure 3. Is an external view of the conventionally used invention.

First, please review corresponding preferred embodiments in Figures 1 and 2, mainly comprised of a base seat **20** and a framework **30**, wherein

Five. Invention specifications (3)

said framework **30** further includes the supporting tread body **31** and the running belt loop **32** wrapped outside said supporting body **31**, and said running belt loop **32** can sustain a dynamic force (for example, a motor, not shown in the illustration) and corresponding front and rear roller cylinder **33** and **34** pulling and rotating, characterized by:

The rear end of said framework **30** has attached at a suitable location linking piece **35**, enabling the pivot connection to be positioned at the base seat **20** relative to the suitable location, and the framework **30**'s front end downside then installed in connection has an active top supporting piece **40**, and causing said top supporting piece **40**'s bottom end to have a return piece **50** additionally connected; later, the return piece **50** is again positioned on a suitable location at the base seat **10**; here, it relies on the aforementioned structural piece for its construction, after the front end of framework **30** sustains force, further taking subsequent downward slant because of the active top supporting piece **40**'s simultaneous displacement, repeat supporting gravity gradually lessens (namely, the running belt loop **32** rotates taking the user's foot exerting force and moving it back to the rear side of framework **30**, thus according to the sequential loop movement), furthermore it can rely on the top elevating function of the return piece **50** and simultaneously return it to its original position, thus making said framework **30** able at a specified axis to slide in a specific repeated upward and downward exercise course.

It is easy to say that when the user puts both feet into position on the running belt loop **32** at the rear end and prepares to engage in running exercise, the framework **30** position is maintained at the original angle of incline position, when the repeat user starts running and take one step on the running belt loop **32**'s front end, said framework **30** takes the pivotal connection point **A** produced as a consequence of gravity, the rotating axis on a downward movement (namely, the framework **30** is presenting in a downward incline state), in this manner, it more smoothly enables the user to bear his/her bodyweight, thus avoiding the need to have the user's weight (namely, bodyweight) be a load to bear as it elevates upward; yet still ensure the expected exercise results.

The previously described specific axis may indicate pivotal connection point **A** as the base standard and with the ground supporting level form an imaginary line **A - A**, or using the rear roller cylinder **34** in framework **30**

## Five. Invention specifications (4)

center axle **B** as the base standard, and with the ground maintain another imaginary line **B - B**, thus making the framework **30** able at any one specific level of upward and downward axis previously described to engage in uniform upward and downward oscillation, relying on the use of the framework **30** for the downward movement process and invisibly consuming the user's gravity load.

Of course, perhaps the esteemed examiner believes that this use of return piece **50** to make the framework **30** return to its original location is the same technical category as that used for the general exercise equipment shock absorbing structure (according to the conventionally known patent in U.S. Patent Number **4974831**); however, the inventors must make particular emphasis that the so-called shock absorbing structure is merely one that causes the framework to be able to effectively reduce the structure's applied force during stress, therefore its shock absorbing path (namely, the framework's displacement path) is extremely minute and not clear. On the contrary, the present invention uses precise rules for a greater displacement process, and it must consume all of the user's upward rising gravity during the exercise process and thus demonstrate new objectives and functions. Clearly the two are truly not the same and we ask for your further review.

Generally speaking, the present invention is in fact a practical and advanced design. Not only has it not been seen in any publication, it has not been properly produced and developed. In accordance with the patent application claims, we consequently submit the application and ask the examiner to grant the patent as soon as possible, with our gratitude.

### Brief description of the illustrations:

**10:** Treadmill      **12, 14:** Tread      **16:** Belt      **20:** Base seat  
**30:** Framework      **31:** Supporting tread      **32:** Running belt loop      **33:** Front roller cylinder  
**34:** Rear roller cylinder      **35:** Connecting segment      **40:** Active top support      **50:** Return piece  
**A:** Pivotal connection point      **B:** Center axle

Five. Invention specifications (5)

## Six. Scope of patent application

The present invention pertains to the structure of a jogging machine with a low exercise load, it is mainly constructed of a base seat and a framework, wherein said framework further comprises a supporting board body and a loop of running belt wrapped around the outside of said supporting board, and said loop of running belt can sustain dynamic force with corresponding front and back roller wheels pulling to turn the wheels, characterized by:

Said framework has a connecting piece that has been installed at the right location at the back end of said structure, enabling the pivotal connection to position at the right location on the base seat, and an active top supporting piece installed and connected at the front end of the framework's down side, and making said return piece be further connected at the bottom end of said top supporting piece, then, positioning the return piece at the right location on the base seat; here, it relies on the structure described above for its composition, after the front end of the framework sustains force and because the active top supporting piece's simultaneous displacement follows it in a downward incline, it again waits for gravity to gradually lessen, and it relies on the top elevation function of the return piece to simultaneously return to its original position, thus using said framework it is possible at a specified level for the axis to repeatedly slide up and down in a particular exercise session.

Figure 1

Figure 2

Figure 3

申請日期：90.3.7 案號：90203361

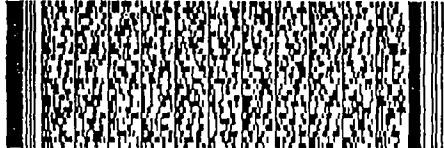
類別：  
A63B 22/2

(以上各欄由本局填註)

公 告 本

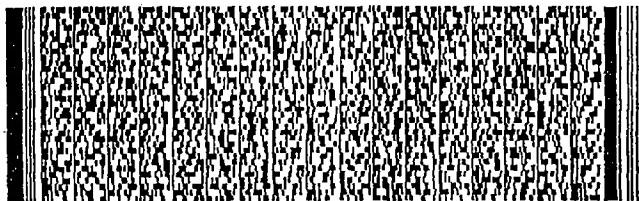
## 新型專利說明書

一、 新型名稱	中 文	低運動負荷之跑步機結構 472593
	英 文	
二、 創作人	姓 名 (中文)	1. 王國樑 2. 吳涼舟
	姓 名 (英文)	1. 2.
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三、 申請人	姓 名 (名稱) (中文)	1. 鉑泰實業股份有限公司
	姓 名 (名稱) (英文)	1.
	國 籍	1. 中華民國
	住、居 所 (事務所)	1. 台中縣太平市長龍路2段233巷1號
	代表人 姓 名 (中文)	1. 王國樑
代表人 姓 名 (英文)	1.	



#### 四、中文創作摘要 (創作之名稱：低運動負荷之跑步機結構)

### 英文創作摘要 (創作之名稱：)



本案已向

國(地區)申請專利

申請日期

案號

主張優先權

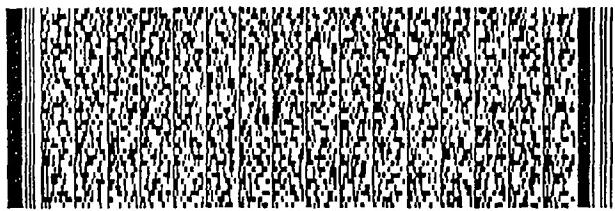
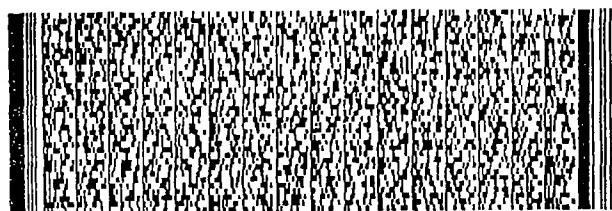
無

## 五、創作說明 (1)

本創作係與跑步機有關，更詳而言之，特別係指一種可令框架隨受力而產生傾角變化，從而形成特殊運動行程以大幅減輕跑步者運動負荷之新穎創作。

按，一般跑步機之框架在使用中均恆常保持一固定角度，因此，使用者於運動時，便等同於此造、上應會有平地或坡地遂行跑步運動，顯然會有不同。當然，當並非使用者力能達到的運動量，乃致喪失預期的運動效果。

同理，如圖三所示所之一種踏步機結構，係美國第5二步步相隙運動構，關於踏踏體間隙構係在踏板10於使用時，令使用者習之一部慎運動先於踏步板12、14上各設一可輪轉之帶體16，令使用者在踏步板12、14間存在『不等必』，而在該帶體16輪轉的過程中，若使用者之腳不慎陷入該間隙處時，往往容易造成受傷之情事；又，使用者必需在踩踏時，仍舊有如跑步或爬坡一般，使用踏步板12(或14)，抬高腿部並施力於位於相對高點之對應踏步板12(或14)，方得以令該踏步板12(或14)隨之下沉，復再將身體重量(即上提重力)全數挪移至該踏步板12(或14)上，以使另踏步板14(或12)同步產生上移行程，如此反覆遂行預期之



## 五、創作說明 (2)

運動行程，惟踏步板14(或12)在上移之行程中，使用者之腳部亦同樣置於其上，故其腳部之重量當然也必需由使用者加以負荷，簡言之，此等踏步機10或習知之跑步機確能產生一定程度之運動效果，但卻無法在運動過程中有效分擔使用者於上提重力方面之負荷，進而無法幫助使用者維持運動持久性者。

是，為改善上述各項習用同類型創作於使用上之缺失，研創人乃憑藉其多年來熟執此業之實務經驗，積極潛心研究開發，終研創出本創作，故其最主要之目的係為使用者減輕地以使體能較輕鬆、況器材者。該者愉較所運動器材能為使用者於運動過程中，適度且確實能獲得該等運動健身體方面之好處者。

為使進一步深入瞭解本創作之技術手段與結構特徵，茲配合圖式詳述於后：

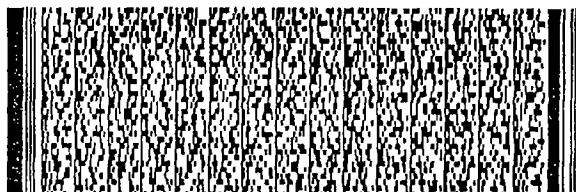
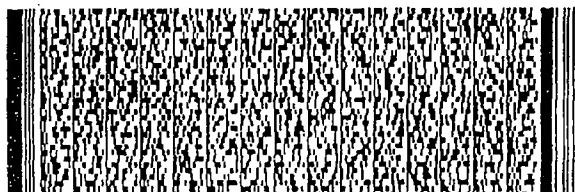
### 圖式之簡單說明：

第一圖：係本創作一較佳實施例之組合側視圖。

第二圖：係依第一圖所示較佳實施例之作動示意圖。

第三圖：習用創作外觀示意圖。

首先，請配合參閱圖一、圖二所示本創作之一較佳實施例圖，其主要係由一底座20及一框架30所構成，其中，



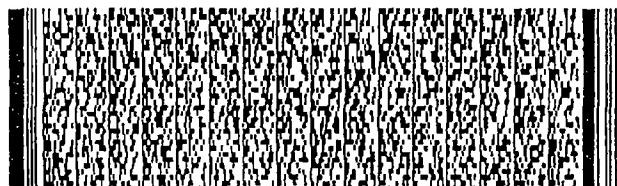
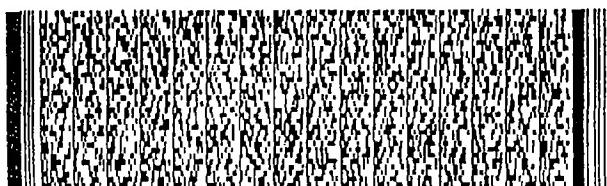
## 五、創作說明 (3)

該框架30更包括有支撑板體31及圍繞於該支撑板體31外周之跑步循環帶32，且該跑步循環帶32係可受動力體（如馬達等，未示於圖）配合前、後滾筒33、34之牽引而輪轉，惟其特徵在於：

該框架30後端適處設有連結片35，俾樞結定位於底座20相對適處，而框架30前端下方則連設有一活動頂持件40，並令該頂持件40之底端又連設有一歸復件50，之後，再將歸復件50定位於底座10之適當位置上；是，藉上述構件之組裝，當框架30前端於受力後，便將因活動頂持件40之同步位移而隨之向下傾斜，復待重力逐步減輕（即跑步循環帶32之輪轉將使用者之施力腳向框架30後方帶回，如此依序循環動作），又可藉歸復件50之頂昇作用而同步回復原位置，從而使該框架30能在一特定水平軸線作反覆地上、下擺動之特殊運動行程。

易言之，當使用者將雙腳置於跑步循環帶32上之後端並準備進行跑步運動時，其框架30的位置仍維持原之傾角位置，復待使用者開始起跑而將一腳踏上跑步循環帶32之前端時，該框架30將因重力之產生而隨之以後端之樞結點A為旋軸而下移（即框架30呈下傾狀態），如此，便可順勢承受使用者身體之重心及體重，從而免除使用者將重力（即自身體重）上提所必需承擔之負荷，但卻同樣能保持預期之運動效果。

上述之特定水平軸線可指以樞結點A為基準，而與地面保持水平之一假想線A—A，或是以框架30後滾筒34中



## 五、創作說明 (4)

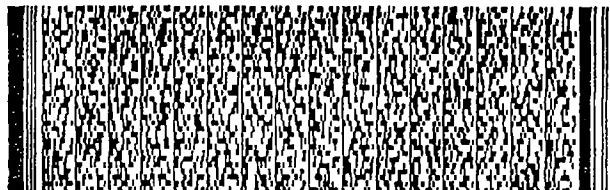
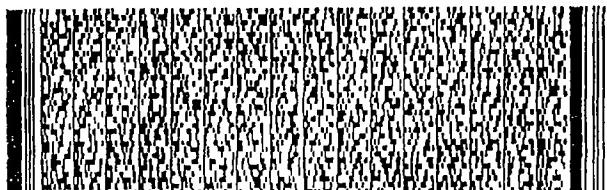
心軸 B 為基準，而與地面保持水平之另一假想線 B - B，進而令框架 30 能在前述之任一特定水平軸線上、下，進行規律之上、下擺動，藉以使在框架 30 下移的過程中，無形地消弭使用者之重力負擔者。

當然，或許貴委員將認為此等利用歸復件 50 以令框架 30 歸復原位之技術類同於一般運動器材所泛用之緩衝機構（如美國第 4 9 7 4 8 3 1 號習知僅是令框架在受力時位能移行（即框架之位移行程）極其微小且不明顯，反觀本創作，則係以精確規劃之較大位移行程，以全數消除使用者在進行跑步運動時必定會產生之上提重力，因而展现出新的目的與作用，顯見兩者間實不能被相提並論，此點，還請明鑑。

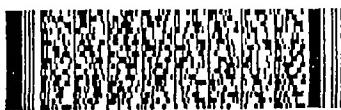
綜上所述，本創作確實是一極具實用性及進步性之設計，其不僅未見於任何刊物也適於產業之發展性，乃符合專利申請要件，爰依法提出申請，祈請惠予審查並早日賜予專利，至感德便。

### 圖號之簡單說明：

10：踏步機 12、14：踏步板 16：帶體 20：底座  
30：框架 31：支撐板體 32：跑步循環帶 33：前滾筒  
34：後滾筒 35：連結片 40：活動頂持件 50：歸復件  
A：樞結點 B：中心軸



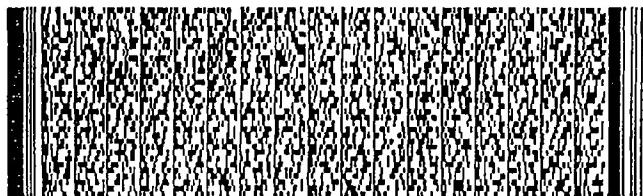
五、創作說明 (5)



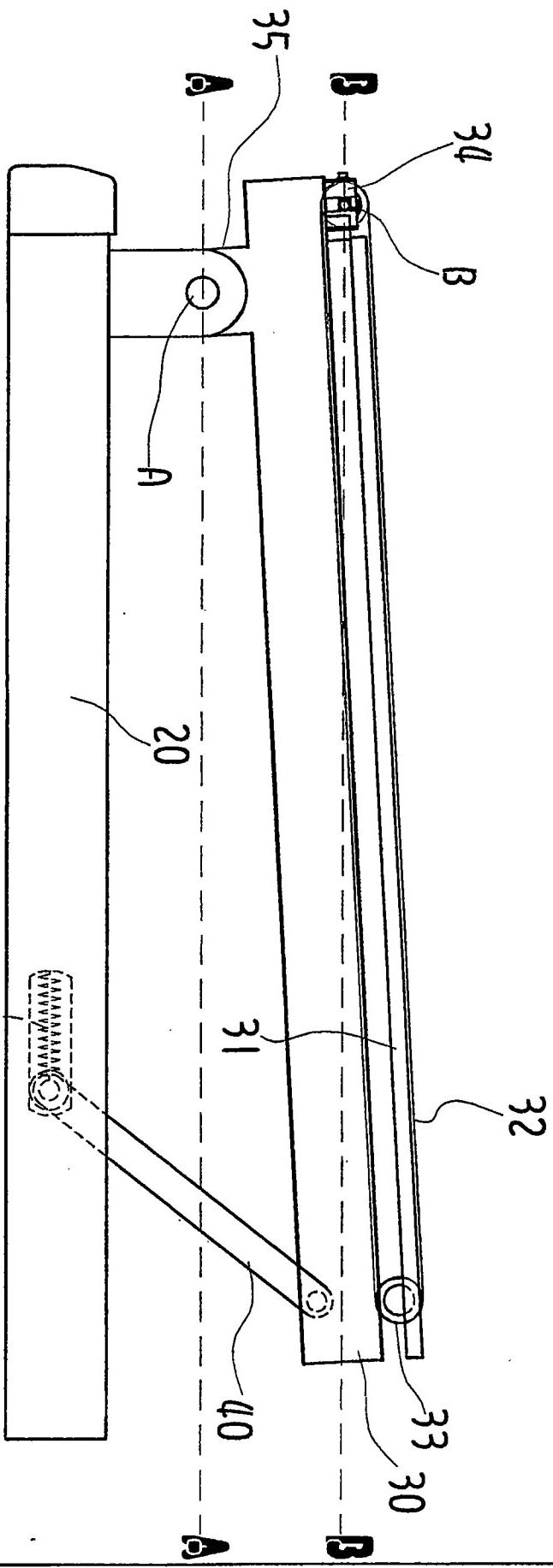
## 六、申請專利範圍

一種低運動負荷之跑步機結構，其主要係由一底座及於繞圈體及板體，該板體更包括支撐板環帶，且該跑步循環帶係可受動力體配合前、後滾輪之牽引而輪轉，惟其特徵在於：

該框架後端適處設有連結片，俾樞結定位於底座相對處，而框架前端下方則連設有一活動頂持件，並令該頂於端架前傾斜，當框架向下滑回時，再將歸復件定於底座上；是，藉上述構件之組裝，當框架同步位移而隨之作用而同步地上、下擺動之特殊運動行程者。



Application No.: 90203361

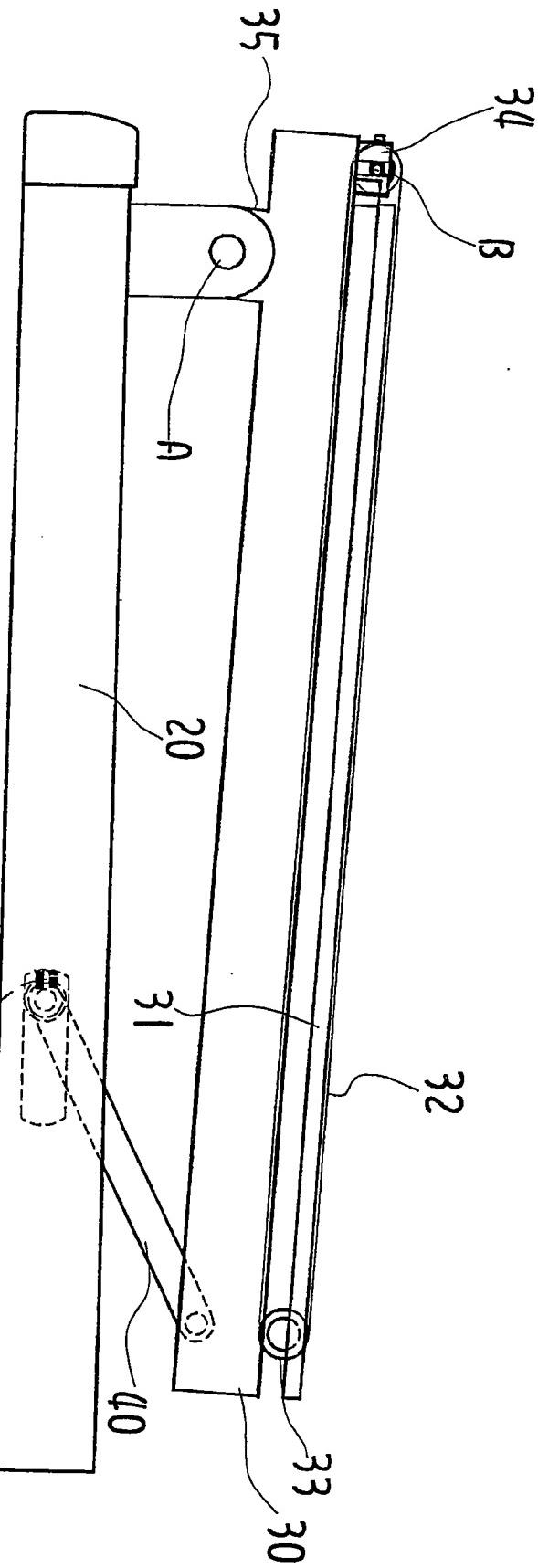


第一圖

Fig. 1

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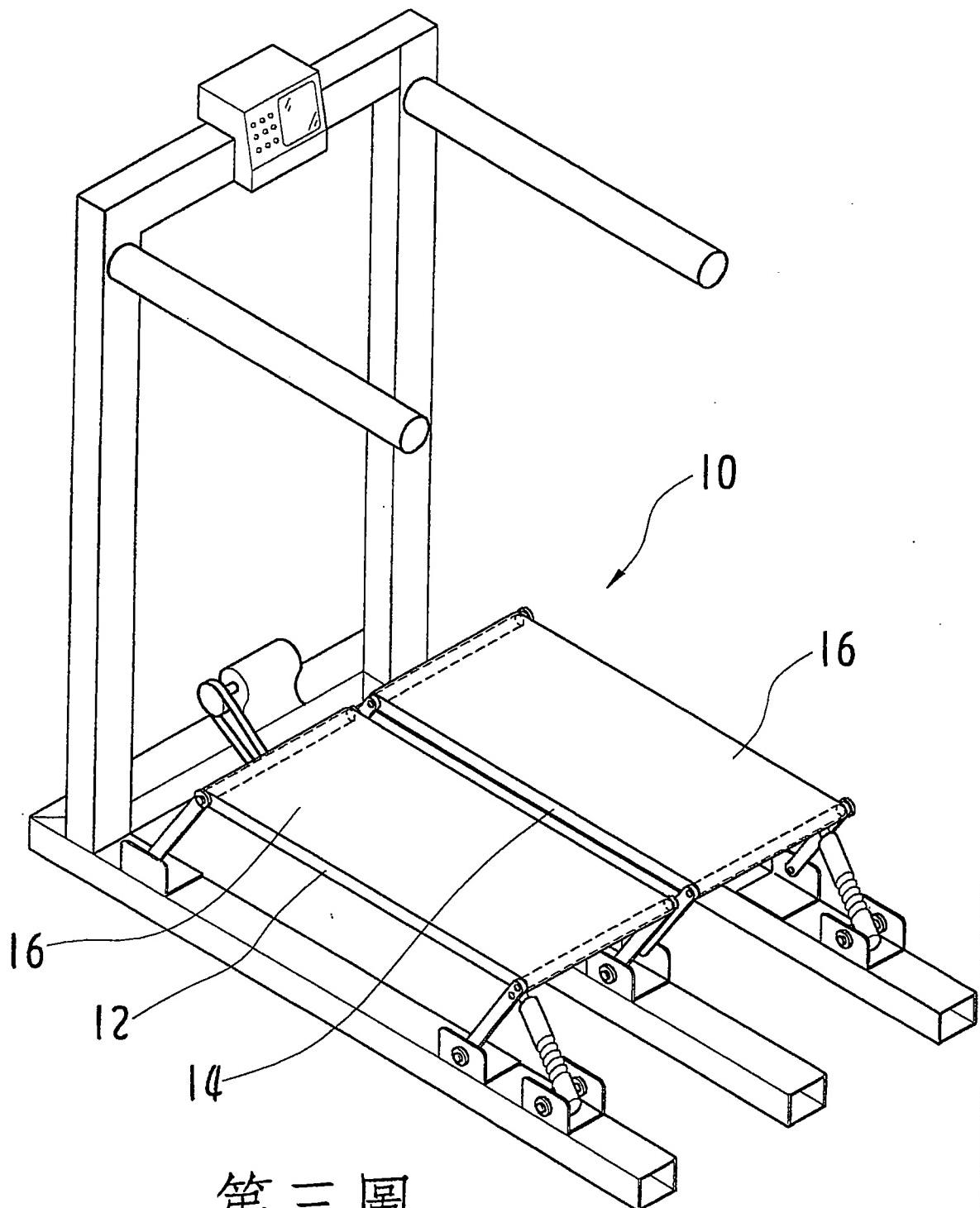
圖式



第二圖

Fig. 2

90203361



第三圖  
PRIOR ART

Fig. 3